REMARKS

ON

ANTISEPTIC DRESSINGS.

By ROBERT F. WEIR, M.D.,
SURGEON TO THE NEW YORK AND ROOSEVELT HOSPITALS.

[*REPRINTED FROM THE NEW YORK MEDICAL JOURNAL, JANUARY*, 1880.]

In the "American Journal of the Medical Sciences" for April, 1879, I called attention to the advantages of carbolized jute over Lister's carbolized gauze, not only in accommodating itself to the inequalities of surface in certain parts of the body, as for instance the groin and the region of the breast and axilla, but also in being cheaper and more readily manufactured. In the latter respect particularly I again beg leave not only once more to commend the prepared jute,* but also to testify to the excellent gauze that can now be made offhand by means of a formula that has recently been made known to us by the German surgeon, Von Bruns. This is made by immersing gauze (cheese cloth), or coarse muslin, or even mos-

* Made after the formula of Münnich, by taking for each pound of jute 50 grammes of carbolic acid, 200 gr. of resin, 250 gr. of glycerine, and 550 gr. of alcohol. After immersing the jute in this mixture, prepared by first melting the resin in the alcohol by warmth and then adding the acid and glycerine, it is dried and can be immediately used. Or it can be made by the cheaper method resorted to in the New York and Roosevelt Hospitals, consisting of the replacement of the alcohol by benzine, in the proportions of 10 per cent. of carbolic acid, 40 per cent. of resin, 10 per cent. of paraffin, and enough benzine to moisten a pound of jute.

quito-netting in a mixture consisting of 400 grammes of powdered resin, 2 litres of alcohol, 100 grammes of carbolic acid, and 80 grammes of castor-oil. The resin is dissolved by heat in the alcohol, and the other ingredients are then added. The gauze thus prepared is even softer than when made after the formula of Lister, which, it is well known, can be obtained only with difficulty by the practitioner far from a large city.

The gauze of Von Bruns differs, it will be noticed, from Lister's in the substitution of castor-oil for paraffin. Instead of letting the gauze completely dry by the evaporation of the alcohol, it can, if it is not immediately required, be wrapped while yet wet in rubber cloth, and put away in a tight box for future use. This careful preservation of all carbolized materials is imperative; for, while it is true that the resin contained in these various mixtures permits the evolvement of carbolic acid to take place slowly, yet experience has shown that, even when such precautionary measures as enveloping the prepared dressings with rubber cloth or with oiled silk "protective" have been resorted to, deterioration of the impregnated material will surely take place. In the article referred to, I quoted Münnich as stating that, after eighteen months' preservation, Lister's carbolized gauze was found on testing to have retained as much as 3·8 per cent. of carbolic acid, and that carbolized jute showed after six months a loss of but 3 per cent. of acid. These facts led me to say that "such data rendered it justifiable to preserve a stock of antiseptic material on hand, provided it be kept strongly compressed if jute, and tightly folded if gauze, and in both cases that it be wrapped in oiled silk or rubber cloth and stored in a box in a cool place." Lately I have had reason to modify this statement, from having been induced to submit the various preparations of carbolized jute and gauze to a quantitative analysis to determine the strength of acid retained in them at varying times from the date of their manufacture. The results have differed considerably from those of Münnich, while the method of testing has been mainly the same resorted to by him.

For instance, seven samples yielded the following percentages of carbolic acid when analyzed:

1. Carbolized jute, made at the New York Hospital July

12, 1879, and carefully kept wrapped up in rubber cloth and secured in a box, gave, when tested November 19, 1879, 1·46 per cent. carbolic acid.

2. Carbolized jute, made November 9, 1879, after Münnich's formula, and freely exposed for three days, when tested November 19th, gave 2·95 per cent. carbolic acid.

3. Carbolized gauze, made at the Roosevelt Hospital August 27, 1879, after Lister's formula, and kept in a box wrapped up in rubber cloth, gave, when tested November 19th, 1·44 per cent. carbolic acid.

4. Carbolized gauze, made at the New York Hospital September 23, 1879, after Lister's formula and similarly preserved, gave, when tested November 19, 1879, 1·57 per cent. carbolic acid.

The percentage given by Münnich of the full strength of Lister's gauze is 5 per cent. In order to have a satisfactory comparison established between the carbolized gauze and carbolized jute, three specimens of prepared jute, manufactured October 20, October 31, and November 13, 1879, were analyzed, and gave respectively a percentage 5·80, 4·56, and 5·56 of acid.

These figures explained clearly some disappointments that had recently occurred, wherein, in the treatment of certain injuries and wounds, old jute had been employed, and, in searching for a reason for this, this investigation was resorted to. Reasoning somewhat from the fact that a 1 to 40 or 2·50 per cent. solution is the weakest used in a wound, I should be disposed, though accurate data on the point are yet wanting, not to place in contact with such a wound a dressing of any less strength, and hence have directed that any carbolized jute or gauze below this standard should be recarbolized before being used. The sum of these remarks hence is, 1. That new carbolized material can be easily made by any practitioner, instead of such a one being dependent, as heretofore, upon a manufacturer in some large city; and 2. That it should be made in comparatively small quantities, not kept on hand too long, and should be preserved in a box in a cool place, tightly rolled up in rubber cloth, oiled silk, or "protective."

Dr Billings U.S.A.
S. G. O.
Washington
D. C.